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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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DOUGHERTY & TROXELL
5205 LEESBURG PIKE, SUITE 1404
FALLS CHURCH, VA 22041

EXAMINER

EDWARDS, ANTHONY Q

ART UNIT

PAPER NUMBER

2835

DATE MAILED: 03/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/001,789

Applicant(s)

HSU, CHIEN-SHIH

Examiner

Anthony Q. Edwards

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

Claims 11 and 19 are objected to because of the following informalities: the parentheses enclosing the words “connected with the base” are not necessary and should be removed. Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase “in order to increase an arm and reduce force” is incomprehensible. Likewise, the claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 8, 10, 12, 14, 15, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,874,696 to Hayashi et al. Referring to claims 1 and 7, Hayashi et al. disclose an elevated and lower (*sic*) key structure or structures for a keyboard apparatus,

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comprising: multiple a key-top-lids (125), bases (522), and scissors-devices (124d) having a first connection rod and a second connection rod (531), wherein the two connection rods intersect to form a turning scissors configuration with both ends of the scissors-device separately connected to the base and the key-top-lid, and the key-top-lid being moved in an upward and downward manner relative to the base through the scissors-device (see FIG. 6 and the corresponding specification). Hayashi et al. also disclose a guiding block(s) (523b) installed on the base by a moveable manner, which can be moved between a first position and a second position (see FIG. 2 and the corresponding specification), wherein the guiding block moved from the second position toward the first position, the guiding block presses upon the second connection rod and makes the key-top-lid lowering down relative to the base, when the guiding block is moved from the first position toward the second position, the guiding block releases the second connection rod and makes the key-top-lid rising up relative to the base.

Referring to claims 2 and 8, Hayashi et al. disclose the key structure(s) for a keyboard apparatus of claims 1 and 7, including a elastic bodies (122) in the key structures, installed between the bases and the key-top-lids. See column 7, lines 39-42.

Referring to claim 3, Hayashi et al. disclose key structure of claim 1, further comprising a guiding board (523) installed on the base, having the guiding block (523b) installed thereon, wherein horizontal movement of the guiding board causes the guiding block to move between the first position and the second position. See FIGS. 2 and 6 and column 11, lines 57-61.

Referring to claims 4, 10 and 17, FIG. 2 of Hayashi et al. shows the key structure for a keyboard apparatus of claims 1, 7 and 14, respectively, further comprising the guiding board (523 installed under the base, and having a guiding block (523b) installed on the guiding board,

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as well as an opening (522b) formed on the base, which corresponds to the guiding block. FIG 2 also shows the guiding block passes through from the opening and protruding upwardly to the base, so that the guiding board can move in a horizontal direction relative to the base and to move the guiding block between a first position and second position.

Referring to claims 5, 12 and 18, FIGS. 6A and 6B of Hayashi et al. show the key structure for a keyboard apparatus of claims 1, 7 and 14, respectively, wherein a lower end of the second connection rod is formed as a turning, pivoting joint relative to the base, an upper end of the second connection rod is connected to key-top-lid, when the guiding block is moved from the second position toward the first position, the guiding block presses upon the second connection rod and rotates around an axis of the lower end and makes the upper end of the second connection rod to bring down the key-top-lid and further makes the key-top-lid lowering down relative to the base (*sic*).

Referring to claims 14 and 15, Hayashi et al. disclose the keyboard apparatus as claimed, having elastic bodies installed between the base and the key top lid, and also comprising at least one operation part (523e), movably connected to the guiding board (523) and movable in a horizontal direction relative the base (522). See FIG. 3 and corresponding specification of Merkel.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 13, 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. Referring to claims 9 and 16, it is unclear how the phrase "installed on the base" differs from the same phrase in the dependent claims. Notwithstanding, should this limitation relate to the positioning of the guiding board relative to the base, Hayashi et al. disclose the claimed invention except for positioning the guiding board on top of the base. It would have been obvious to one of ordinary skill in the art at the time the invention was made to place the guiding board on top of the base (as opposed to the bottom of the base) since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Referring to claims 13 and 20, Hayashi et al. disclose the claimed invention except for the guiding board having at least two stop-blocks for confining movement on the guiding board in a horizontal direction relative to the base. Hayashi et al. disclose a plurality of squares or rectangular holes that provide an allotted space for movement of a membrane switch. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include at least two limited stop blocks since the examiner takes Official Notice of the equivalence of the stop blocks and the rectangular holes of Hayashi et al. for their use in

collapsible keyboards. The selection of any of these known equivalents to limit movement of components lying beneath the key caps would be within the level or ordinary skill in the art.

Claims 11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. in view of U.S. Patent No. 6,137,676 to Merkel. Hayashi et al. disclose a keyboard apparatus for a notebook computer having a main body (51a) and screen part (51b) pivotally connected to the body, as well as at least one operation part. Hayashi et al. does not disclose the elements relating to the operation part. Merkel discloses an operation part or structure (62) having a first support frame (66), a second support frame (62) and an elastic element (68), wherein a first end of the first support frame is pivotally connected with the base (38), a first end of the second support frame is pivotally connected with the guiding board (52), a second end of the first support frame is connected with a second end of the second support frame, one end of the elastic element is installed in an appropriate position of the operation part and the other end is against the base. See FIG. 3, column 6, lines 63-67, and column 7, lines 1 and 2.

Regarding claim 19, Merkel also discloses a contact moving part (33) on the screen portion of the keyboard apparatus.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the keyboard apparatus for notebook computer of Hayashi et al. to include the operation structure for raising and lowering the keyboard, as taught by Merkel, since the examiner takes Official Notice of the equivalence of the linked structure (62) of Merkel and the pin structure (523e) of Hayashi et al. for their use in collapsible keyboards. The selection of any of these known equivalents to provide horizontal movement of a guiding block would be within the level or ordinary skill in the art.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent Nos. 6,172,868; 5,532,904; 5,602,715; and 5,793,605 disclose collapsible portable keyboard structures.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Q. Edwards whose telephone number is 703-605-4214. The examiner can normally be reached on M-F (7:30-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Darren Schuberg can be reached on (703) 308-4815. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 306-5511 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-9929.

aqe
March 21, 2003


DARREN SCHUBERG
PATENT EXAMINER
TECHNOLOGY CENTER 2800